



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/518,421	03/03/2000	Victor Rossin	805.300US01	6283

7590 02/02/2004

CHRISTOPHER F. REGAN
ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST, P.A.
P.O. BOX 3791
ORLANDO, FL 32802-3791

EXAMINER

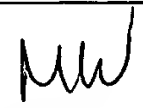
RODRIGUEZ, ARMANDO

ART UNIT	PAPER NUMBER
----------	--------------

2828

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/518,421	ROSSIN ET AL.	
	Examiner	Art Unit	
	Armando Rodriguez	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


PAUL IP
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449)-Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed November 24, 2003 have been fully considered but they are not persuasive.

Applicant's arguments on page 11 pertain to the waveguide having a gradually expanding middle region for discriminating against higher order modes. Applicant's attention is directed to column 9 lines 15-25, which discloses the tapered rib laser [see figure 17] having a fundamental mode and no evidence of higher order modes at any tested current level. Therefore, it would have been obvious to a person having ordinary skill in the art to infer that the structure of figure 17 will suppress higher order modes. Applicant's arguments on page 11 pertaining to the high power and elimination of "kink" in the output power vs. current, are not recited within the claim language of independent claims 1 and 17, furthermore applicant is advocating impermissible importation of subject matter from the specification into the claim [see MPEP 2111].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,10-15,17,32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vawter et al (PN 6,229,947).

Figure 17 illustrates a semiconductor laser having a tapered waveguide for coupling to an optical fiber, the waveguide having three portions a wide portion (75), a tapered middle portion (76) and a narrow portion (78), as described in column 6 lines 30-39.

Figures 11A and 11B illustrate the far-field beam profile with a peak at 0 degrees and a constant slope, as described in column 9 lines 1-14.

Column 9 lines 15-25 disclose suppression of modes higher than the fundamental mode.

Figures 2A-2C, 13A and 13B illustrate different widths for the tapered waveguide, as 2.4, 1.2, 0.7, 3.0 and 1.0 μm , respectively, which are within close range of the recited widths of applicant's invention.

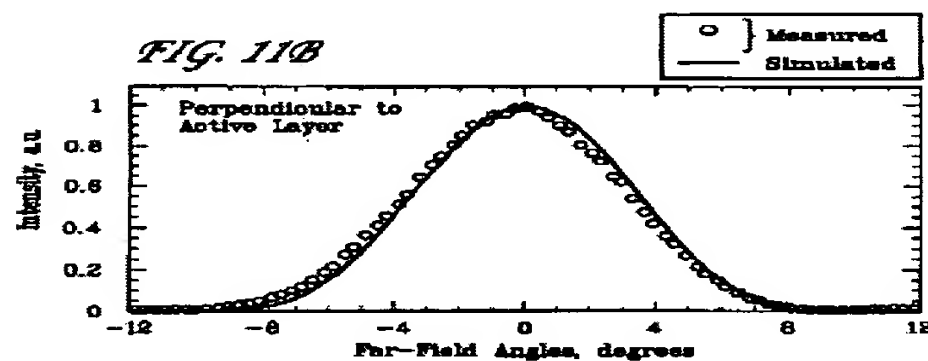
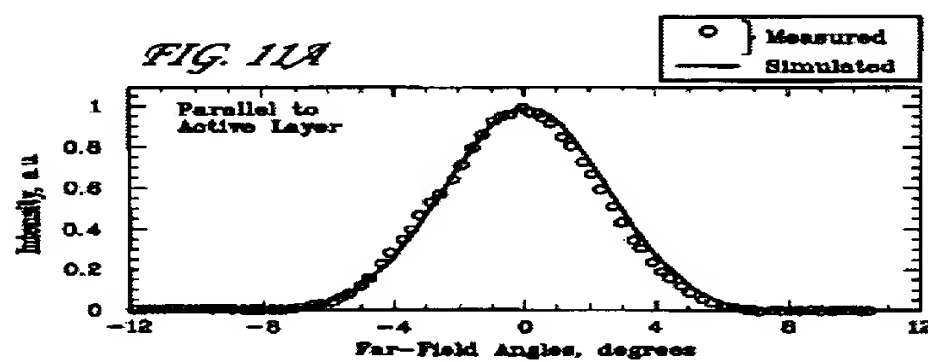
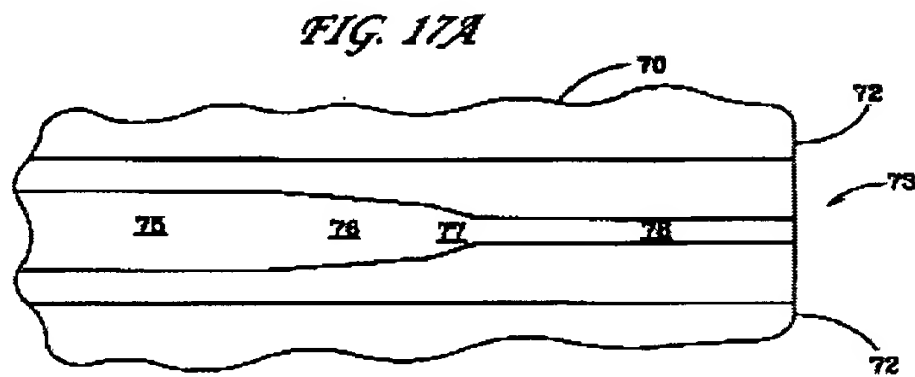
Therefore, it would have been obvious to person having ordinary skill in the art at the time the invention was made to modify the semiconductor laser of Vawter et al by changing the size of the device and rearrangement of parts.

In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

In *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950), discloses that rearrangement of parts of a prior art, which does not modify the operation of the device

Art Unit: 2828

is considered unpatentable. In the present application the rearrangement of the regions does not modify the operation of the device, since both devices provide suppression of the higher order modes.



Claims 1-9,16-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vawter et al (PN 6,229,947), as applied to claims 1 and 17 above, and in view of Ventrudo (PN 6,058,128) and Miki et al (PN 6,094,515).

Regarding claims 1-9,17-31,

Vawter et al discloses coupling the laser system to a fiber, but fails to disclose the fiber having a wavelength selection grating.

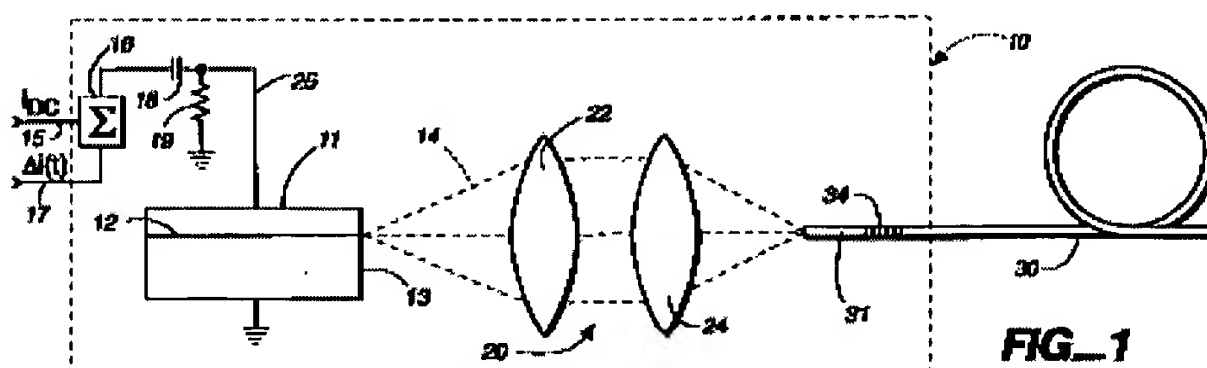
Ventrudo discloses coupling a laser system to a fiber having a grating.

Ventrudo illustrates in figure 1 a semiconductor laser (11) coupled via lenses (22,24) to an optical fiber (31), which contains a rare earth active gain medium (30) and a Bragg grating (34) positioned at 2cm to 3cm from the laser facet and having a reflectivity not exceeding 10%, as described in column 4 lines 19-67. In the abstract and columns 5 and 7 Ventrudo discloses the grating is provided at distance from the laser for causing the system to switch between the coherence collapse and coherence state.

Therefore, it would have been obvious to a person having ordinary skill in art at the time the invention was made to couple the laser system of Vawter et al with the fiber grating of Ventrudo because Ventrudo discloses coupling a fiber grating to laser system which will provide a broad band of wavelengths in a communications system.

Regarding claim 16,

The use of temperature controller within a semiconductor laser coupled to fiber waveguide is well known in the art, as shown in figure 2A and disclosed in column 4 line 13 of Miki et al.



Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

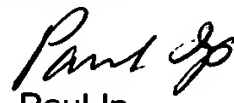
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Armando Rodriguez whose telephone number is 571-272-1952. The examiner can normally be reached on 10-hour day / M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on 571-272-1941. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-4881.


Armando Rodriguez
Examiner
Art Unit 2828


Paul Ip
Supervisor
Art Unit 2828

AR/PI